



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/769,415

01/30/2004

Andrew G. Tucker

33227/462001;SUN030221-US

8014

32615

7590

07/22/2010

OSHA LIANG LLP/Oracle  
TWO HOUSTON CENTER  
909 FANNIN, SUITE 3500  
HOUSTON, TX 77010

EXAMINER

VAUGHAN, MICHAEL R

ART UNIT

PAPER NUMBER

2431

NOTIFICATION DATE

DELIVERY MODE

07/22/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@oshaliang.com  
lord@oshaliang.com  
hathaway@oshaliang.com



UNITED STATES PATENT AND TRADEMARK OFFICE

---

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/769,415  
Filing Date: January 30, 2004  
Appellant(s): TUCKER ET AL.

---

Robert P. Lord  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 5/10/10 appealing from the Office action mailed 12/8/09.

**(1) Real Party in Interest**

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The following is a list of claims that are rejected and pending in the application:

Claims **41, 47, 48, 50, and 53-58** are rejected under 35 U.S.C. 102(e) as being anticipated by USP Application Publication 2003/0172109, to Dalton et al., hereinafter Dalton.

**(4) Status of Amendments After Final**

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

**(5) Summary of Claimed Subject Matter**

The examiner has no comment on the summary of claimed subject matter contained in the brief.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

**(7) Claims Appendix**

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

**(8) Evidence Relied Upon**

USP Application Publication 2003/0172109

Dalton et al.

11-2003

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

**Claims 41, 47, 48, 50, and 53-58 are rejected under 35 U.S.C. 102(e) as being anticipated by USP Application Publication 2003/0172109, to Dalton et al., hereinafter Dalton.**

As per claim 41, Dalton teaches a computer readable medium comprising a set of one or more instructions which, when executed by one or more processors, cause the one or more processors to perform the method of:

in an operating system environment controlled by a single operating system kernel instance (0022), establishing a global zone [operating system as a whole] comprising a first non-global zone [compartments; 0021], wherein the first non-global zone comprises a first file system [main file system; 0025] and wherein the global zone comprises a second file system [restricted file system; 0023];

receiving, from a first process, a first request to perform a first operation [0061], wherein the first process is associated with a first set of privileges [tags or labels] and is executed by at least one of the one or more processors, and wherein the first set of privileges restrict the first process to the first non-global zone [not permitted to change to the root of the file system; 0061];

Art Unit: 2431

in response to the first request, determining whether performing the first operation is within the first set of privileges (0061); and

denying the first request if performing the first operation is not within the first set of privileges (0063).

As per claim 54, Dalton teaches a system comprising:

at least one processor (computers inherently possess processors);

a computer readable medium, comprising a set of instructions which, when executed by the at least one processor, cause the at least one processor to perform the method of:

in an operating system environment controlled by a single operating system kernel instance (0022), establishing a global zone [operating system as a whole] comprising a first non-global zone [compartments; 0021], wherein the first non-global zone comprises a first file system [main file system; 0025] and wherein the global zone comprises a second file system [restricted file system; 0023];

receiving, from a first process, a first request to perform a first operation [0061], wherein the first process is associated with a first set of privileges [tags or labels] and is executed by at least one of the one or more processors, and wherein the first set of privileges restrict the first process to the first non-global zone [not permitted to change to the root of the file system; 0061];

in response to the first request, determining whether performing the first operation is within the first set of privileges (0061); and

denying the first request if performing the first operation is not within the first set of privileges (0063).

As per claims 47 and 55, Dalton teaches performing the first operation comprises accessing an object, the method further comprising: determining whether the first process has permission to access the object [preventing transitioning to root and restricting a process to only those objects in its compartment; 0025].

As per claims 48 and 56, Dalton teaches the first operation includes one of: mounting/unmounting a file system, overriding file system permissions, binding to a privileged network port, and controlling other processes with different user identifiers [0043; binding to a privileged network port].

As per claims 50 and 57, Dalton teaches receiving, from a second process associated with a second set of privileges [its own specific labels or tags], a second request to perform a second operation (0061), wherein the second process is executing in the global zone, and wherein the second process is executed by at least one of the one or more processors (0061);

in response to the second request, determining whether performing the second operation is within the second set of privileges (0061); and

denying the second request if performing the second operation is not within the second set of privileges (0063). This request would be executed if the application has the label or tags to permit it to transition to the root of the file system, thus out of one of the compartments [non-global zone].

As per claims 53 and 58, Dalton teaches the second operation includes one of: modifying all process privileges, writing to system administration file, opening device holding kernel memory, modifying operating system code, accessing file systems restricted to root user, setting the system clock, changing scheduling priority of an executing process, reserving resources for an application, directly accessing a network layer and loading kernel modules [0061-0063; application is preventing from gaining admin level privileges].

#### **(10) Response to Argument**

##### **Response to 1.**

With respect to Appellant's argument in section 1. of the Appeal brief, the Examiner respectfully disagrees and refers Appellant to the rejection above as well as the detailed discussion set forth below.

##### **Response to 1a.**

With respect to Appellant's argument in section 1a. of the Appeal Brief, the Examiner agrees that the plain and ordinary meaning should be afforded to the claim language. In this particular instance, the meaning given to file system has been commensurate with an I/O interface structure that provides access to directories. Dalton clearly teaches a file system in which access to directories is provided (0025). Processes are able to access files within their respective file systems (0097) and it is



Art Unit: 2431

noted that each compartment has its own particular file system (0025).

**Response to 1b.**

With respect to Appellant's argument in section 1b. of the Appeal Brief, the Examiner respectfully disagrees that Dalton fails to identity a first and second file system. There is a need to look beyond merely the word used to name elements in Dalton and rather look into the actual function of the elements themselves in order to gain a true understanding into the actual application of Dalton. On the surface the "OS environment" and "compartments" in Dalton are not named "global region" and "non-global region" respectively, however, upon closer inspection it can be seen that Dalton's "OS environment" and "compartments" provide equivalent functionality as the "global region" and "non-global region" with respect to file systems. Dalton teaches the OS environment has its main file system (0025) which corresponds to the claim's second file system because it is the name associated with the file system of the global zone. Likewise, the claim's first file system is analogous to the non-overlapping restricted subset sections of Dalton (0025). Each isolated compartment has its very own file system, instantiated by a local directory. Under Appellant's own definition of a file system, Dalton's system is clearly providing an I/O interface that provides access to directories for each compartment, separate from the main file system. Processes in each compartment only have access to those directories in their respective compartment's file system.

Turning to Appellant's specification for more evidence, beginning in paragraph [0052], Appellant describes a mounted file system in which zones act like directory boundaries for processes within those zones. Dalton's file systems are precisely described in the same fashion (0097). In fact, both Dalton and Appellant teach that their file systems within the zones have their own root. In both inventions, the operation chroot only transitions to the root of the zone as opposed to the main system's root. This contains processes to their respective zone/compartment and resources. Dalton's specifically teaches a file structure hierarchy that defines compartments (Fig. 11). Appellant's alleges this is somehow different to the claims even though their own invention uses the same hierarchy. Appellant's Fig. 2C and accompanying disclosure in paragraph (0055), precisely define a global zone file system (290) having a subdirectory 291 to which file system 290(a) of non-global zone A, 140(a), is mounted. In both inventions a second file system is defined and implemented as part of subsection of the main system.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., two separate I/O interfaces) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The argument seems to imply that there are a plurality of physical I/O interfaces in the instant invention, but the specification does not support this. Paragraph [0058] discloses that the file systems 180(a) and 180(b) are mapped to a

Art Unit: 2431

single physical storage. Assuming the physical storage has one physical interface, each of the "virtual" zones would each use the same physical interface.

**Response to 2.**

With respect to Appellant's argument in section 2. of the Appeal brief, the Examiner respectfully disagrees and refers Appellant to the rejection and discussion above as well as the detailed discussion set forth below.

**Response to 2a.**

With respect to Appellant's argument in section 2a. of the Appeal brief, the Appellant argues the global zone and non-global zone are not properly constructed in Dalton. Examiner respectfully disagrees. As previously explained, there is a need to look beyond merely the word used to name elements in Dalton and rather look into the actual function of the elements themselves in order to gain a true understanding into the actual application of Dalton. On the surface the "OS environment" and "compartments" in Dalton are not named "global region" and "non-global region" respectively, however, upon closer inspection it can be seen that Dalton's "OS environment" and "compartments" provide equivalent functionality as the "global region" and "non-global region". Appellant states that their global zone refers to the general operation system environment. Dalton teachings concur with this assessment. Dalton's OS environment performs this same functionality (0022). The term "non-global zone" as defined by

Art Unit: 2431

Appellant's specification states that the non-global zone represents separate and distinct partitions of the OS environment. Dalton's compartments are used for the exact same purpose (0023). As such, Examiner finds no difference between the claim's "global region" and "non-global region" and Dalton's "OS environment" and "compartments".

### **Response to 2b.**

With respect to Appellant's argument in section 2b. of the Appeal brief, the Appellant argues the global zone, non-global zone, and file systems are not properly arranged in Dalton. Examiner respectfully disagrees. Appellant's position is that there is only one file system in Dalton and by that view, the non-global zone cannot have a distinct file system. Appellant further defends this position by arguing the file system in each of Dalton's compartments is only a subset of the host file system. By this line of reasoning, Appellant's own invention would fail to have a separate file system in each the zone. Fig. 2C clearly shows the file system 290(a) of non-global zone A 140(a) is a mounted subset of the main file system 290. Moreover, the claim's first file system, originating in the non-global zone is merely a subset of the second file system which originates in the global zone. Examiner finds the Appellant's zones to be equivalent to the Dalton's compartments and each has their own file system. Consequently, the same arrangement of the claim's global zone, non-global zone, and file systems is taught by Dalton.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/MICHAEL R VAUGHAN/

Examiner, Art Unit 2431

Conferees:

/William R. Korzuch/

Supervisory Patent Examiner, Art Unit 2431

/Christopher A. Revak/

Primary Examiner, Art Unit 2431